CLAIMS

What is claimed is:

Sub C2

1 A data collection system comprising:
2 a GSM network;
3 a user application server coupled to said GSM network;
4 a data terminal apparatus including a communications
5 bridge, a first interface, and a wireless radio,
6 said wireless radio configured to connect to said
7 GSM network; and
8 a user equipment coupled to said data terminal
9 apparatus through said first interface, said user
10 equipment configured to collect and send data
11 through said first interface as if placing a
12 circuit switched call link; wherein
13 said communications bridge is configured to simulate
14 said circuit switched call link to said user
15 equipment and to communicate said data over said
16 GSM network through said wireless radio using a
17 non-circuit switched call link, and GSM network
18 is configured to route said data to said user
19 application server for processing.

2. The data collection system of claim 1, wherein said non-circuit switched call link is made via one or more short message service messages.

3. The data collection system of claim 1, wherein said non-circuit switched call link is made via one or more general packet radio service messages.

4. The data collection system of claim 1, wherein said communications bridge comprises application layer object code built over a GSM protocol stack associated with said wireless radio, said application layer object code configured to handle incoming AT commands from said user equipment and handle said simulation of said circuit switched call link to said user equipment.

5. The data collection system of claim 1, said communications bridge further comprising a preprocessor unit, said preprocessor unit comprising:

a microcontroller;

a non-volatile memory coupled to said microcontroller;

a volatile memory coupled to said microcontroller;

an input output controller coupled to said microcontroller, said input output controller including said first interface and a second interface, said wireless radio coupled to said microcontroller through said second interface.

6. The data collection system of claim 1, wherein said communications bridge is configured to packetize data received from said first interface into short message service format.

7. The data collection system of claim 1, wherein said communications bridge is configured to packetize data received from said first interface into general packet radio service format.

8. A method for collecting data over a GSM network comprising:

receiving data at a data terminal apparatus from a user equipment;

simulating a circuit switched call link response to said user equipment;

packetizing said received data into packets for transmission over a non-circuit switch call link to said GSM network;

transmitting said packetized data over said GSM network; and

routing said packetized data through said GSM network to a user application server.

9. The method of claim 8, wherein said packets are short message service packets.

10. The method of claim 8, wherein said packets are general packet radio service packets.

11. A method for receiving information over a GSM network comprising:

transmitting a packet of information over said GSM network, said packet originated by a user equipment;

receiving said packet of information at a data terminal apparatus;

establishing a simulated circuit switched call link between said data terminal apparatus and a user equipment;

transforming said packet of information into serial data information; and

sending said serial data information from said data terminal apparatus to said user equipment over said simulated circuit switched call link.

12. The method of claim 11, wherein said packet of information is in short message service format.

13. The method of claim 11, wherein said packet of information is in general packet radio service format.

14. A computer-readable medium having stored therein sequences of instructions for collecting data over a GSM network, said one or more sequences of instructions causing one or more processing to perform the acts of:

receiving data at a data terminal apparatus from a user equipment;

simulating a circuit switched call link response to said user equipment;

packetizing said received data into packets for transmission over a non-circuit switch call link to said GSM network;

transmitting said packetized data over said GSM network; and

routing said packetized data through said GSM network to a user application server.

15. The computer readable medium of claim 14, wherein said packets are short message service packets.

16. The computer readable medium of claim 14, wherein said packets are general packet radio service packets.

17. A computer readable medium having stored therein sequences of instructions for receiving information over a GSM network, said one or more sequences of instructions causing one or more processors to perform the steps of:

transmitting a packet of information over said GSM network, said packet originated by a user equipment;

receiving said packet of information at a data terminal apparatus;

establishing a simulated circuit switched call link between said data terminal apparatus and a user equipment;

transforming said packet of information into serial data information; and

sending said serial data information from said data terminal apparatus to said user equipment over said simulated circuit switched call link.

18. The computer readable medium of claim 17, wherein said packet of information is in short message service format.

19. The computer readable medium of claim 17, wherein said packet of information is in general packet radio service format.